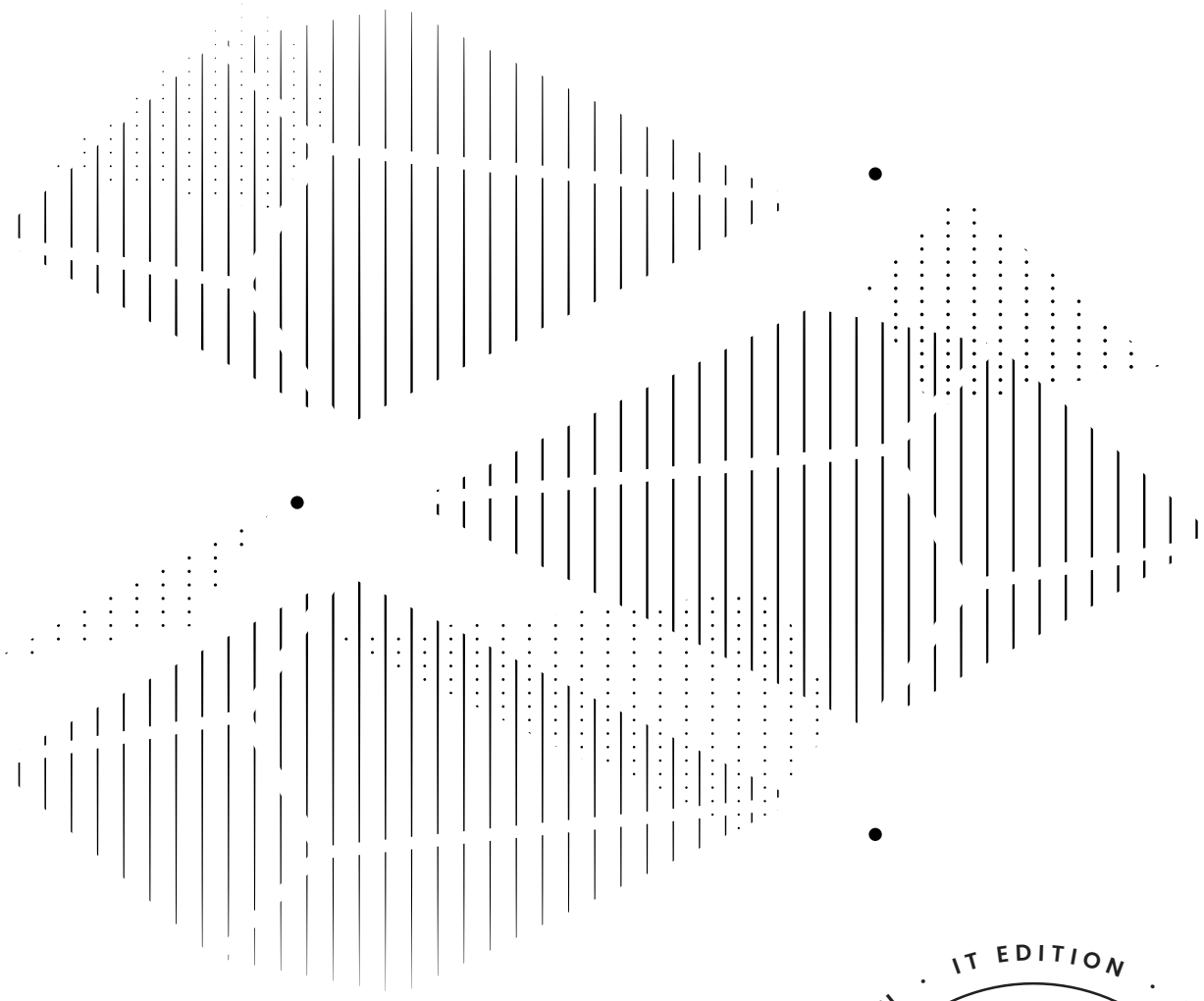
The IT factor

When processes work,
enterprise tech stacks up



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2025

Process Optimization Report

celonis

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Searching for a seamless tech stack

The five editions of the 2025 Process Optimization Report

IT teams are on the front line of tech innovation, but they're being held back by growing tech stack complexity, poor quality data, and legacy systems that are hard to change, according to a global survey of 411 senior IT leaders.

Three-quarters (75%) feel they aren't maximizing the potential of their tech investments. And 87% say they need to better understand how technologies are actually used across the business so they can make the right investment decisions.

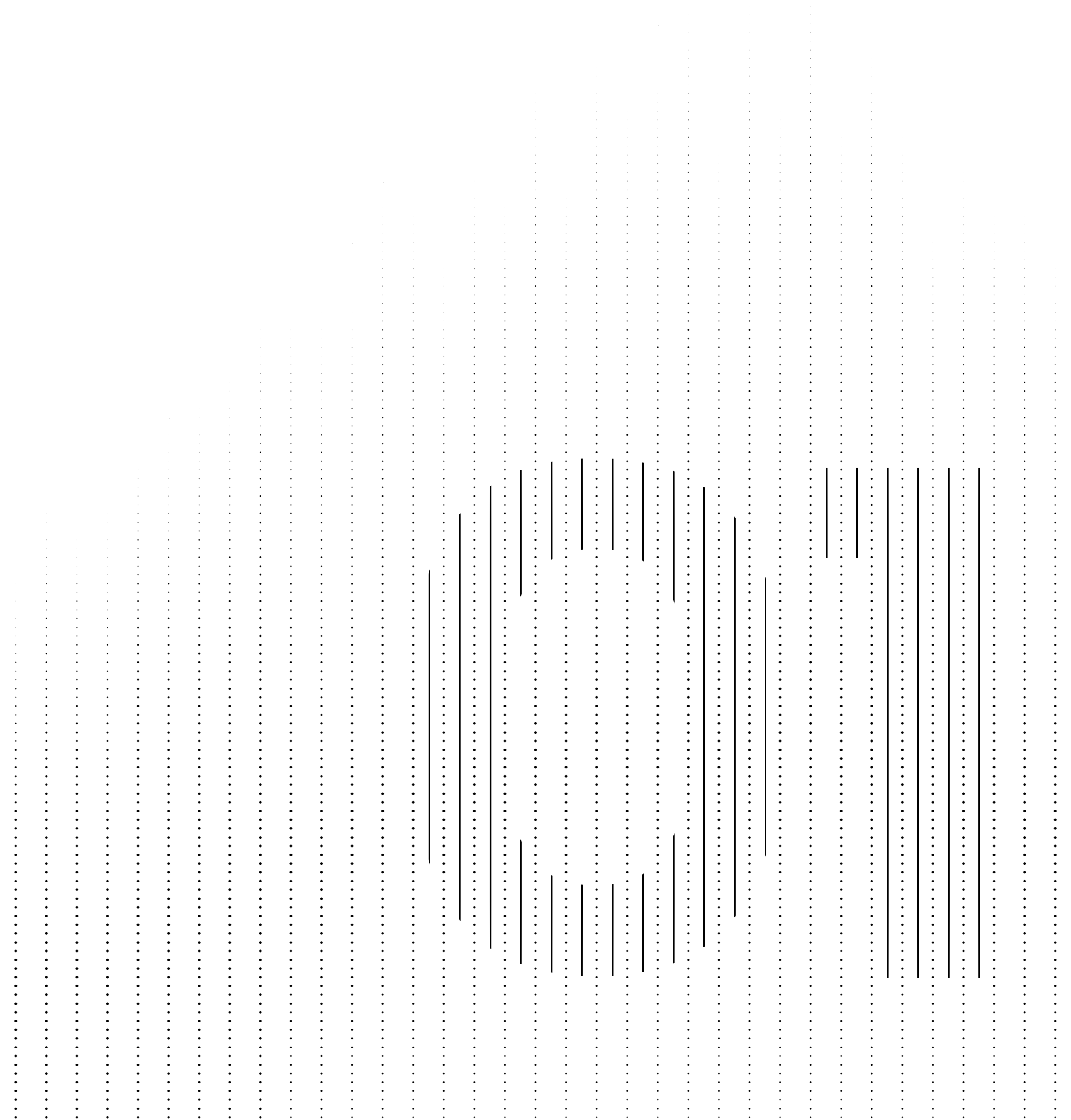
This lack of both connectivity and clarity proves particularly challenging when organizations are faced with major transformation projects, like the migration to SAP S/4HANA or Oracle Fusion. These transformations should in themselves enable innovation, adaptability, and flexibility. But they can cause widespread disruption and take time to deliver ROI when organizations don't fully understand the state of their processes from the outset.

In this report we explore the actions IT leaders are taking to optimize their tech stack, their criteria for a successful system migration, and how they're using emerging technologies. Spoiler: they see implementing AI and automation as their biggest strategic opportunity.

This report forms part of a series of reports from a larger study of 1,620 business leaders, from Australia, Austria, France, Germany, Japan, South Korea, Spain, Switzerland, the UK, and the US. The wider survey includes respondents from the Supply Chain, Finance and Shared Services, and Process and Operations functions, and we'll draw comparisons with these other departments throughout this report where it's relevant to do so.

Let's get started.

Adopting AI and automation

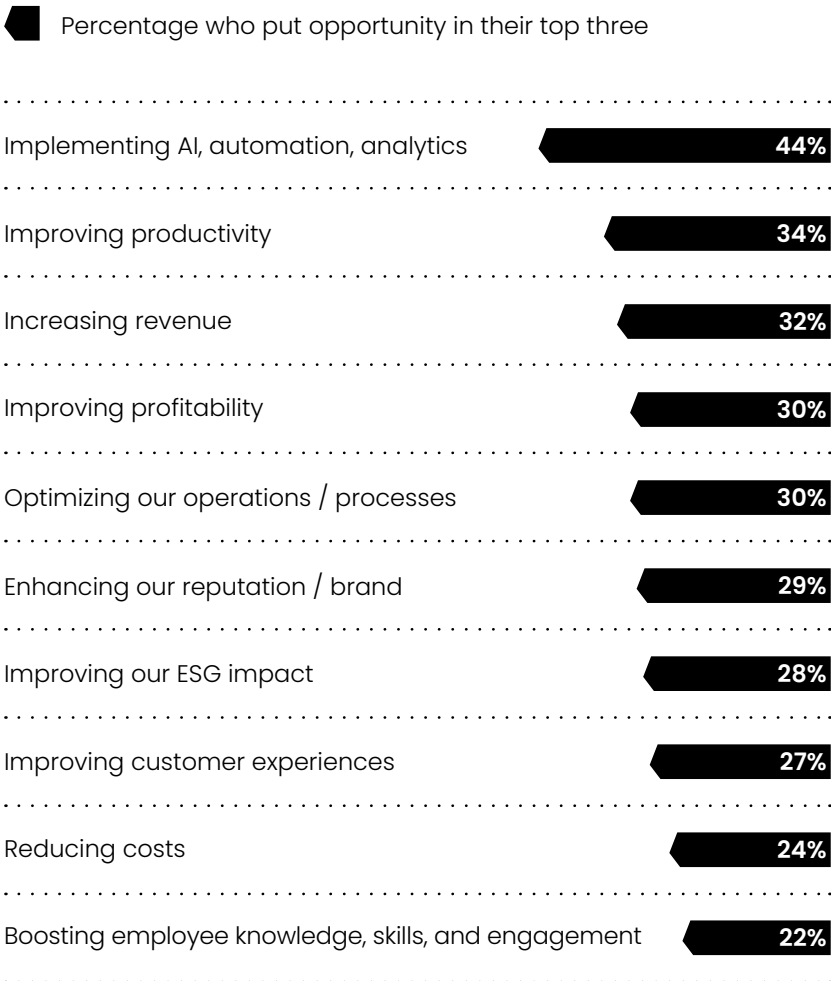


Emerging tech is the top strategic opportunity

IT leaders know the importance of getting systems and processes connected and working. Any disconnect leads to value left behind. And it seems they recognize the potential of emerging technologies to get their stacks singing.

When we asked IT leaders what they see as the top strategic opportunities over the next two years, implementing AI, automation, and analytics comes first by a significant 10% margin, well above more traditional answers like increasing productivity, revenue, and profitability.

Top strategic opportunities in next two years



AI is both an enabler and a concern

IT teams are positive about using AI within their departments. Three-quarters (75%) expect their AI budgets to increase in the next 12 months and 73% expect there to be established use cases in their departments, along with associated policy and usage guidelines, during the same period. A convincing 87% say they clearly understand how AI is going to help their teams to deliver more value, and the same proportion expect the technology platforms they use to leverage the latest AI developments.

75%
Expect AI budgets to increase

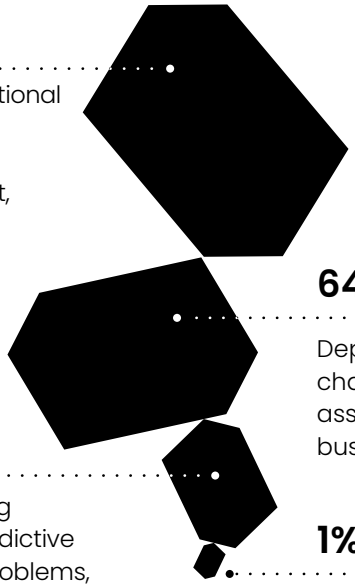
73%
Expect established departmental use cases

87%
Understand how AI will help deliver value

87%
Expect tech platforms to leverage AI

At the enterprise level, AI use is ubiquitous, with 99% of IT leaders saying they already use AI within their organization. A massive 82% say their organization is already pursuing GenAI foundational models for use cases like developer productivity, knowledge management, or customer service.

AI deployments currently being pursued



82%
Leveraging GenAI foundational models for use cases like developer productivity, knowledge management, or customer service

64%
Deploying GenAI chatbots and assistants for business users

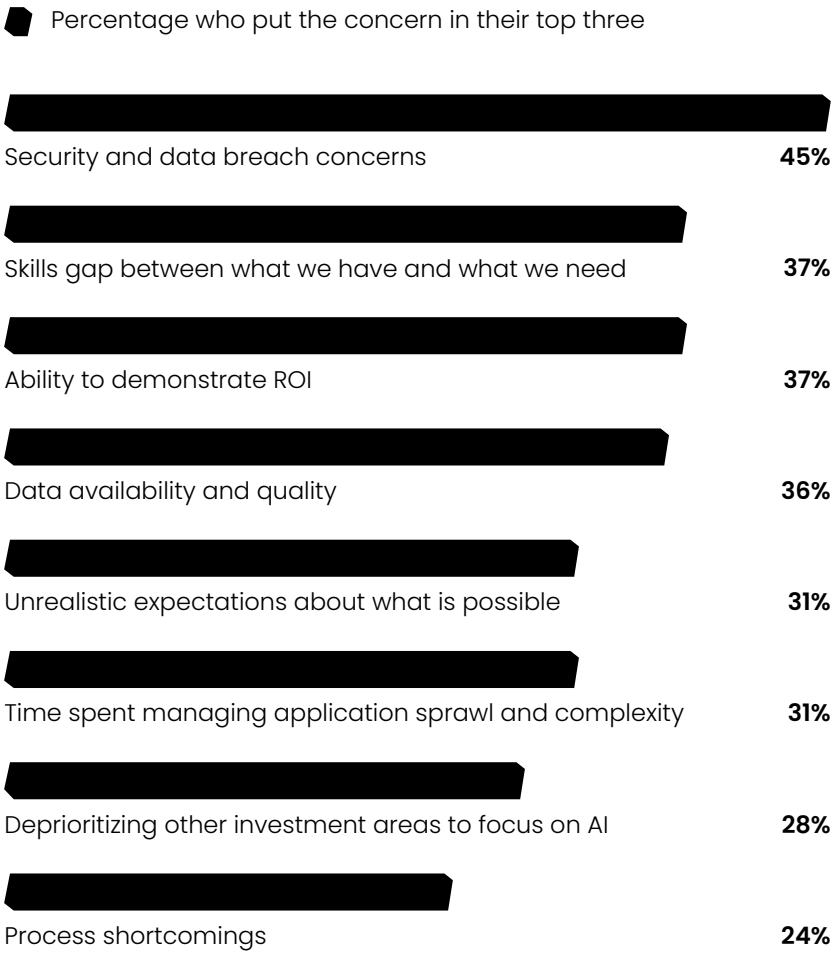
18%
Not using GenAI, but using Machine Learning for predictive analytics, optimization problems, and similar use cases

1%
No AI deployments currently ongoing

However, 90% of IT leaders do have concerns about AI. We asked them to identify their three biggest concerns, and security and data breaches, the skills gap, and difficulty demonstrating ROI top the list.

Concerns around process shortcomings come relatively low, perhaps indicating IT leaders don't yet fully appreciate the importance of optimized processes to effective AI deployment. Many concerns like data availability and quality, and time spent managing application complexity, can be addressed through process improvement, but IT leaders may not yet be connecting the dots.

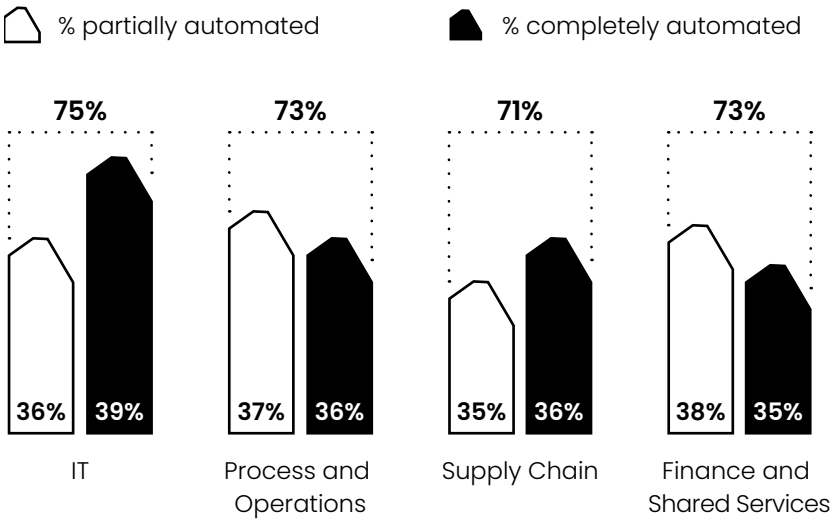
Biggest concerns around enterprise AI use



Productivity and quality: automation has multiple goals

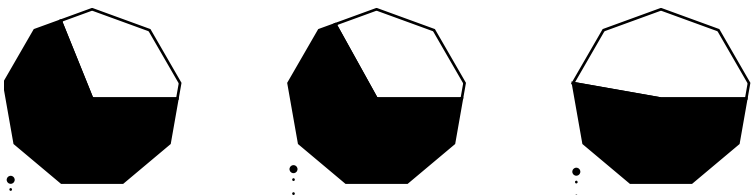
IT teams are slightly further ahead with process automation than other departments, with 75% of their departmental processes at least partially automated.

Process automation by function



Asked for their automation goals over the next 12 months, IT leaders say they're after both productivity and quality. At 69%, doing more with the resources they have comes two percentage points ahead of improving output quality.

Goals of process automation

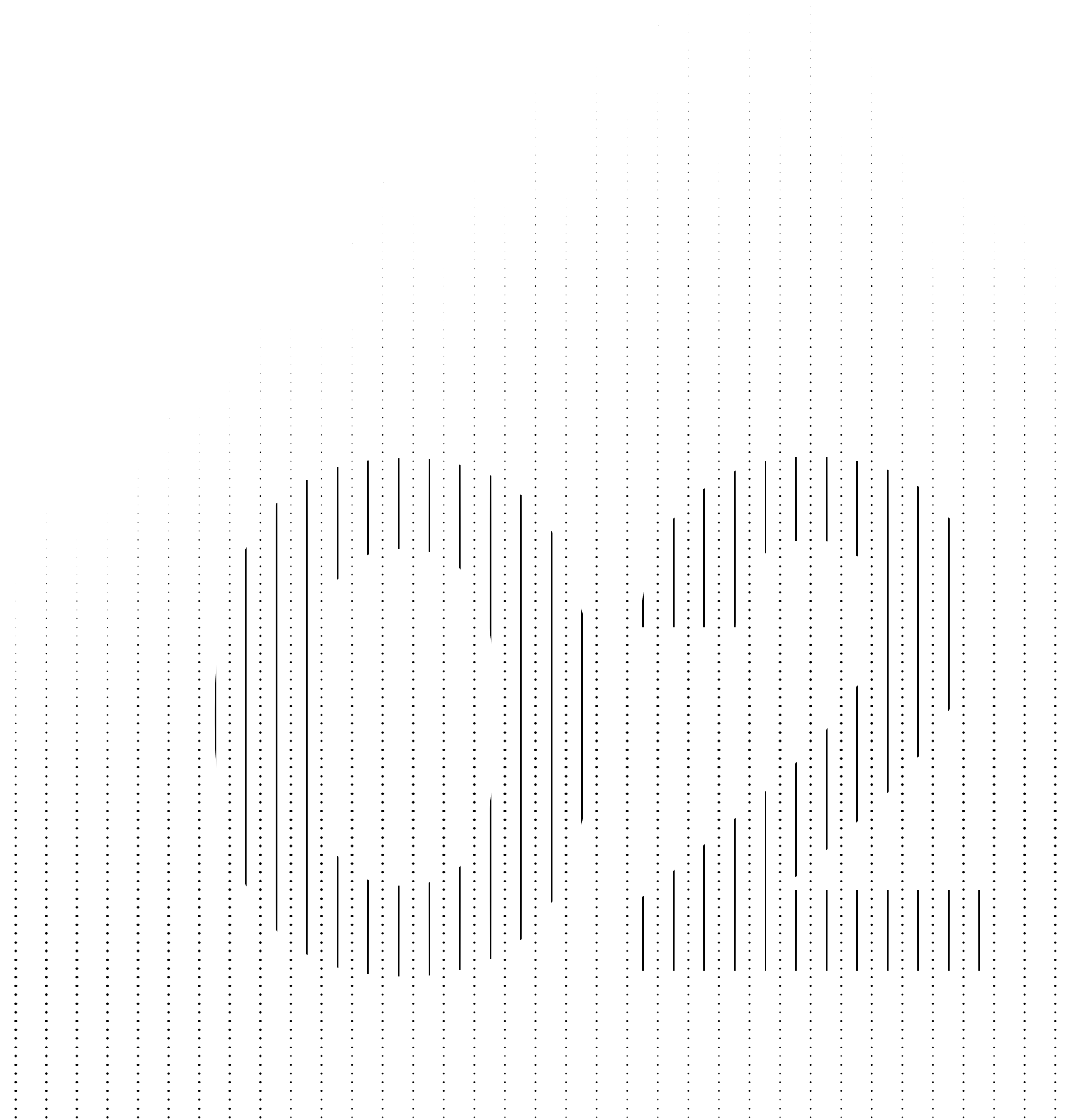


69%
Doing more with the resources we already have

67%
Improving the quality of our output

53%
Cutting costs and resource requirements

Streamlining to support innovation



Tech complexity holds back AI

IT leaders understand that complexity in their existing tech stacks, and resulting difficulties in understanding and improving processes, are preventing them from making full use of the emerging technologies they identified as so crucial in section one.

The vast majority (90%) say it's crucial AI has the context of how their business runs – including how they calculate KPIs, what their policies and procedures are, and how their organization is structured – to be effectively deployed. And 61% say they're concerned the current state of processes in their organization may stop them from making the most of their AI investments.

90% say AI must understand how their business runs to be effectively deployed

61% are concerned their processes will limit what they can achieve with AI

We gave our respondents a list of common obstacles to gaining the in-depth process understanding required for effective AI, and asked them to choose the three most applicable to their business. The top answers – poor data, legacy tech, a lack of systems integration, and tech stack complexity – are all technology related.

What gets in the way of process understanding?

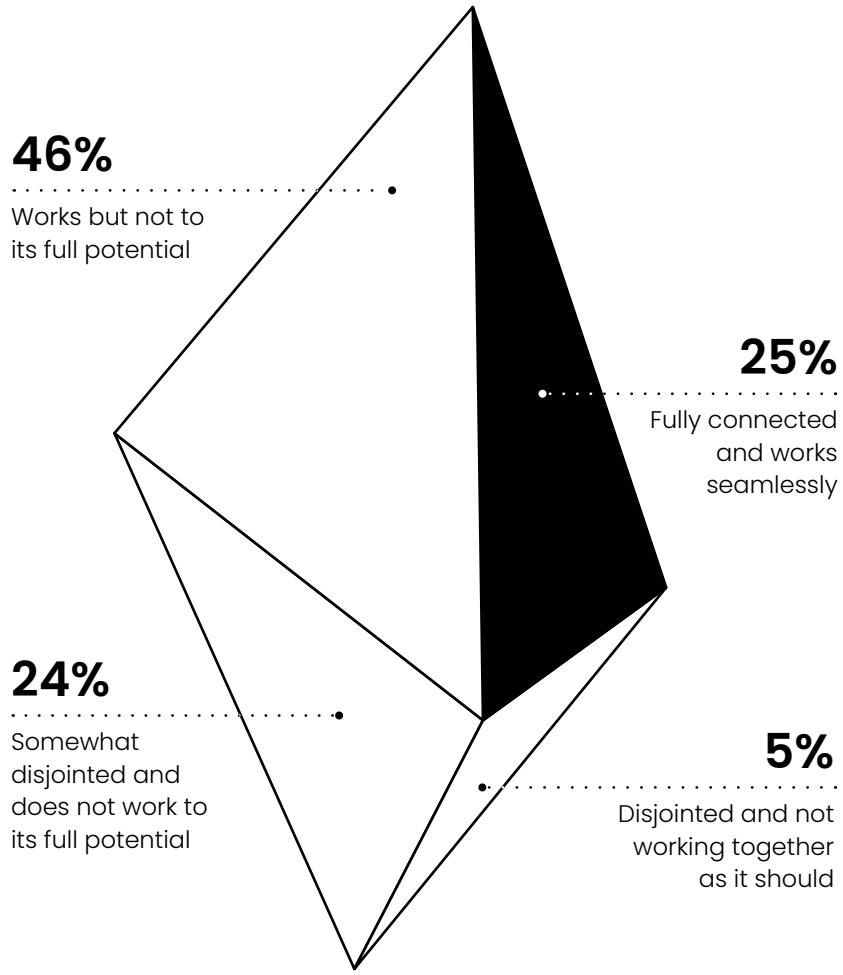
Percentage who put the obstacle in their top three

Availability and quality of data	**41%**	Departments work in silos and don't communicate	**28%**
Legacy technology	**35%**	Poor process visibility	**26%**
Systems don't play well with each other	**34%**	Too much time spent in reactive firefighting mode	**24%**
Tech stack complexity	**32%**	Teams in the same department don't share information	**21%**
Knowing where to start	**28%**	Lack of executive buy-in	**16%**

A huge opportunity to optimize existing tech

To explore this tech complexity situation further, we asked IT leaders how they would describe their current tech stack. Three quarters (75%) say they aren't currently maximizing the potential of their tech investments, which indicates a huge opportunity for tech stack optimization.

Current state of tech stacks



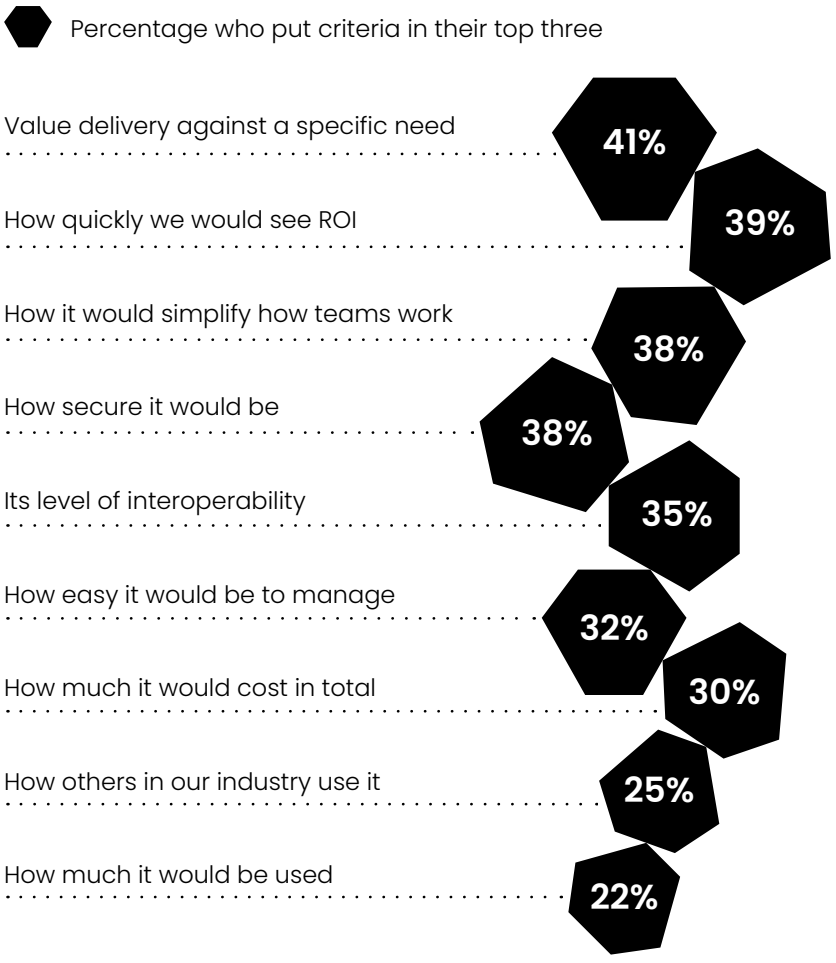
Speed and scale of ROI: deciding what tech to keep

Most IT leaders are already taking action to reduce the volume of applications used within their business, with 86% saying consolidation to reduce the number of SaaS tools they use is a high priority. But this doesn't necessarily mean they're switching to single software suites, with 73% saying they would rather have multiple specialist solutions than an 'all-in-one' solution.

We asked them to indicate their three top criteria for deciding to use, keep, or select a particular technology. The value it will deliver, and its speed to ROI are the top two answers.

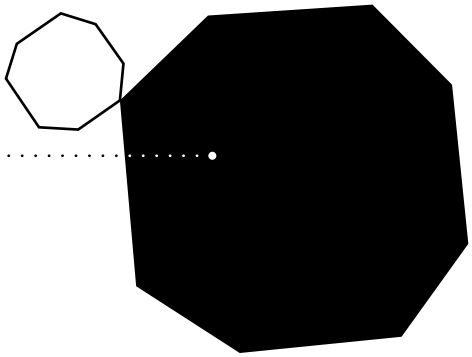
It's interesting that the extent to which a tool will be used is ranked as the least important criteria. It would be easy for non-IT people to assume that this is a far more important factor in selecting or keeping a SaaS application.

Criteria for using a technology



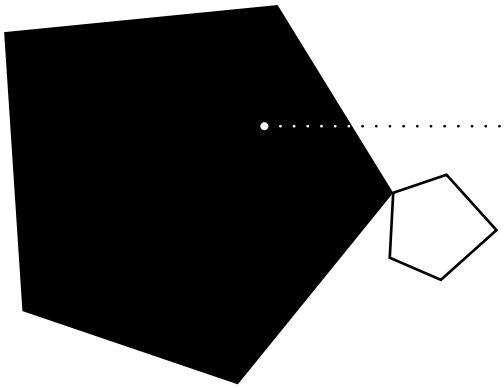
Use process mining to optimize specialist solutions

Advanced process visibility tools like process mining can help organizations with streamlining and optimization. **A significant 90% of IT leaders say process mining could be used to optimize specialist solutions, consequently unlocking more value in their business.** Over a third (36%) are already using process mining and a further 55% plan to use it next year.



90%

say process mining could help make the most of specialist solutions

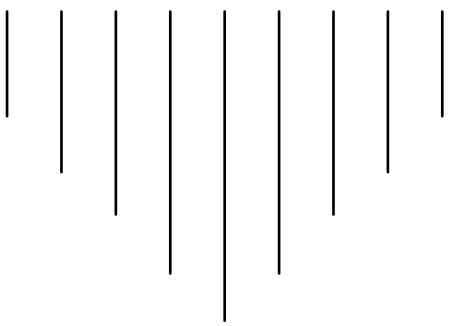


91%

plan to use process mining in the next 12 months

The insights generated by process mining can be combined with AI and standardized process knowledge to deliver **process intelligence**, which IT teams can use to optimize their departmental processes, the wider business's processes, and their tech stacks.

The bond between processes and effective AI is undeniable – check out how the two play off each other.



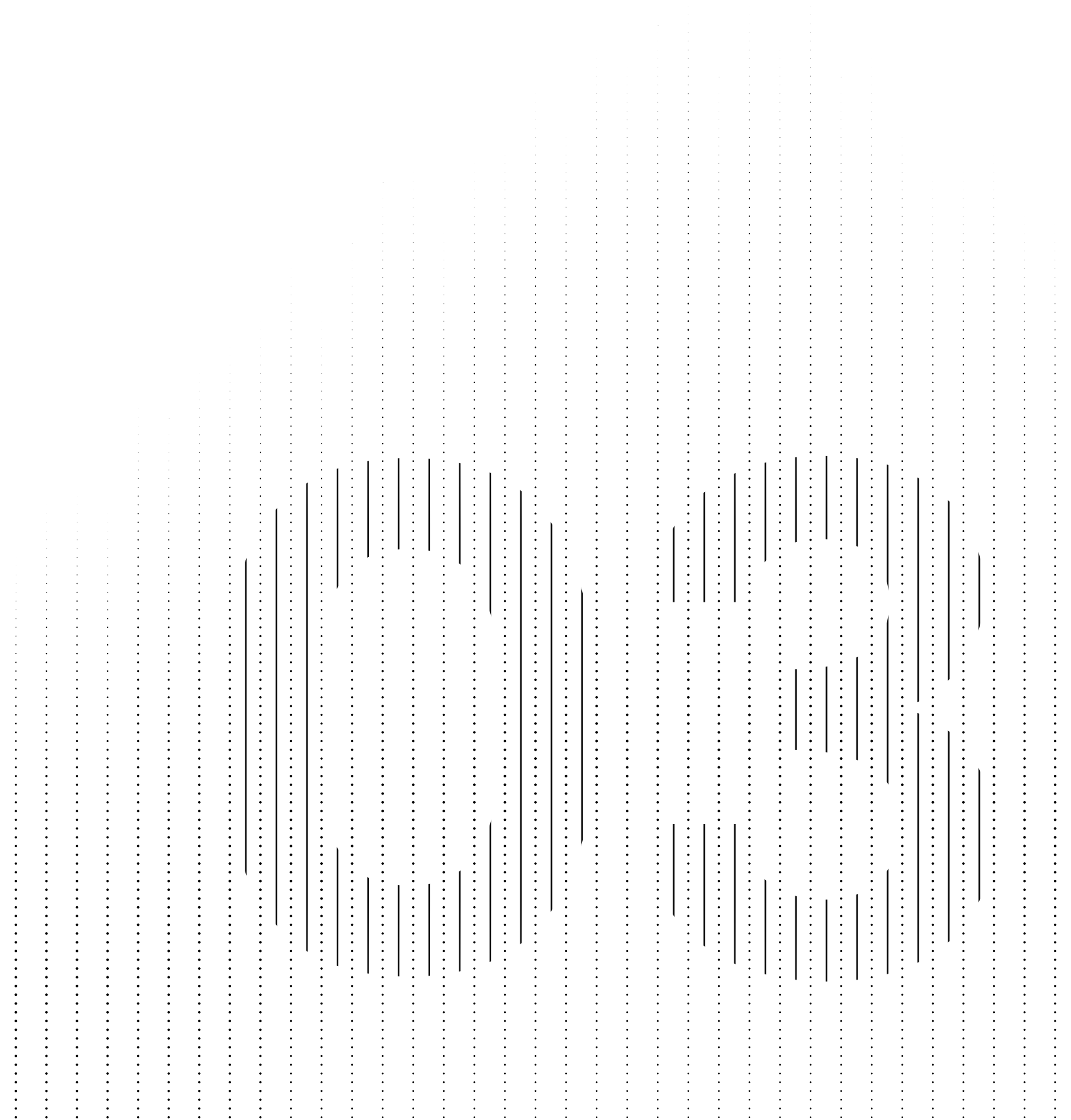
What's the deal with AI and processes?

Celonis Process Intelligence (PI) gives AI the context it needs to be relevant and effective for your business. There's no enterprise AI without PI.

How does it work? After Celonis PI creates a digital twin of a business's end-to-end processes, it then uses AI algorithms to show teams where value opportunities lie and how to capture them.

At the same time, PI provides AI agents, co-pilots, and assistants with the contextual data they need to understand how processes run and interact, like KPI definitions or a business rule that says all invoices above $25,000 have to go to the Finance Director for approval. All that means PI provides the relevant insights that are essential to effectively automate processes with AI agents.

Modernization and migration



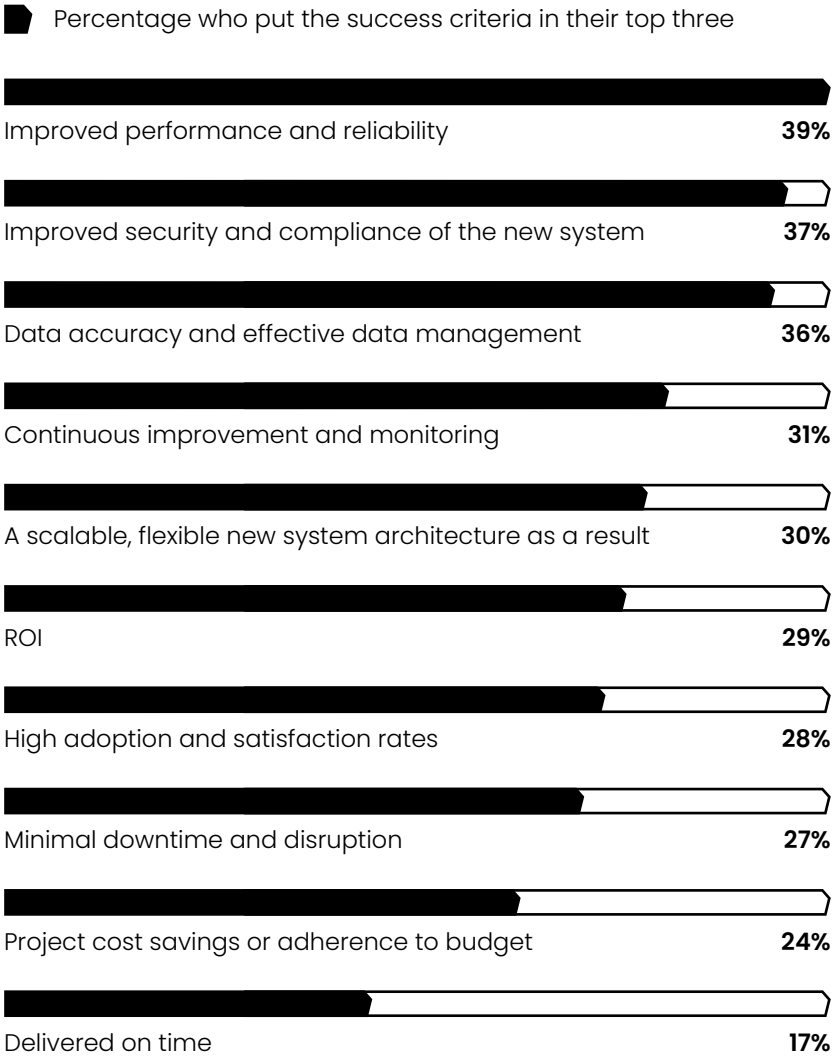
Success criteria for system migration

To take full advantage of emerging technologies, IT teams may need to go further than streamlining tech stacks and undertake larger-scale system transformations, modernizations, or migrations.

The transition to SAP S/4HANA is a great example. Businesses are migrating to S/4HANA not only because SAP is phasing out ECC support in 2027, but also because the upgrade will enable new features that allow improvements in speed, agility, and flexibility.

We asked what IT leaders see as the three most important success criteria for system or cloud migration projects. **Their top responses: performance, security, data management.**

Success criteria for system migrations

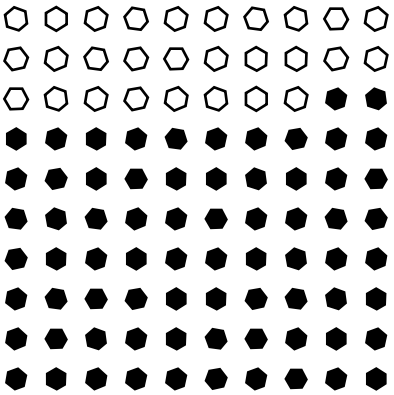


It's interesting that minimal downtime and on-time delivery both come relatively low. Since **72% say system migration projects always take longer than expected**, it may be that delays and downtime are just accepted as somewhat unavoidable, but these setbacks can still be highly disruptive to business operations.

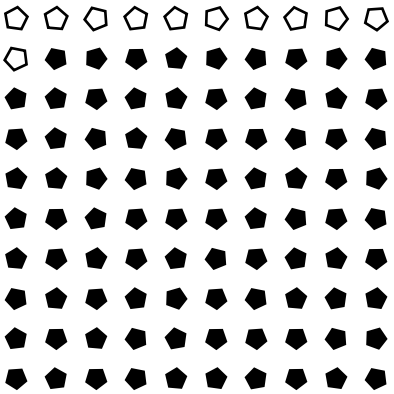
System migrations can be delivered on time, with minimal disruption, and still achieve goals around performance, reliability, security, and data accuracy, if organizations use tools like process mining to understand how the processes involved in those migrations work, and catch any system issues during hypercare.

IT leaders are aware of this, with 89% saying they need to understand how processes work to embark on a successful system transformation.

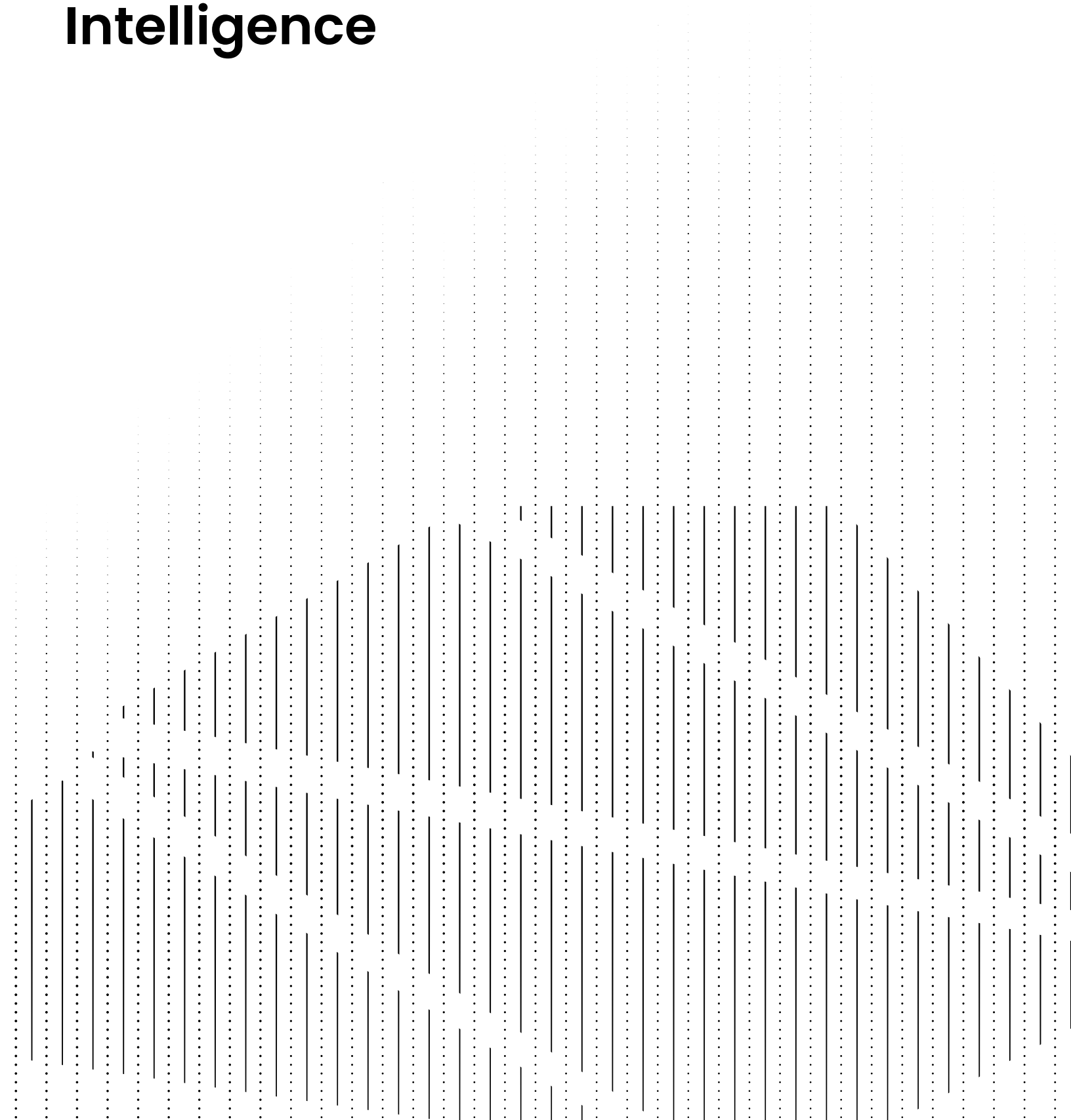
72%
say system migration projects always take longer than expected



89%
say successful system transformation needs process understanding



What's next? Getting started with Process Intelligence



From wanting to empower organizations by leveraging emerging technologies like AI, to optimizing core applications and migrating systems, IT leaders have a lot on their plates.

But balancing these competing priorities becomes easier once you gain an in-depth understanding of how your processes work and how the business uses your systems.

The system-agnostic **Celonis Process Intelligence Platform** extracts data from all your systems to understand how your processes run, and layers in standardized process knowledge and AI to deliver business context. It enables IT to get a living digital twin of end-to-end business processes, so they can see what's happening across all systems, apps, and programs, and across all functions and departments.

Process Intelligence maximizes IT investments without disrupting or replacing systems of record and data platforms, layering on top of them to feed process insights to BI, automation, cloud applications, and AI. Process Intelligence's end-to-end context makes your technologies smarter, enabling you to orchestrate the right actions at the right times and generating meaningful predictions, recommendations, and solutions.

Want to find out more about how Process Intelligence can benefit your organization?

- Read **Process Intelligence for IT: The eBook.**
- Learn how **Siemens is using Celonis for its systems migrations**.
- Discover how you can **use Celonis for IT transformation**.

You can also read our report, **Making processes work**, to find out what 1,620 business leaders across multiple departments are doing to optimize their processes. And there are additional department-specific editions to explore too.

Read the reports:

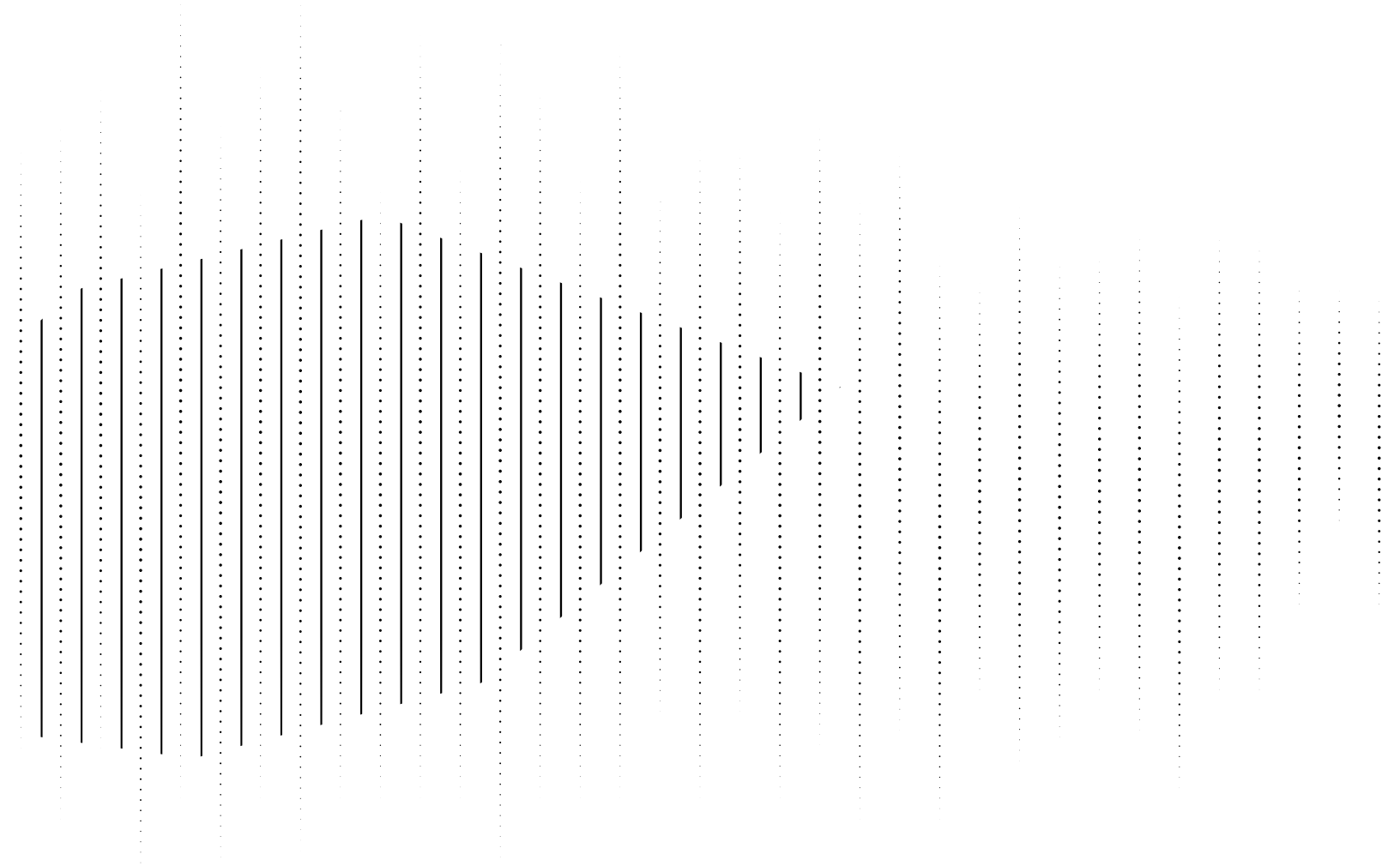
- **Finance and Shared Services Edition**
- **Operations and Process Improvement Edition**
- **Supply Chain Edition**

Survey sample

The research was conducted by Insight Avenue, an independent, third-party, specialist B2B and technology research consultancy. 1,620 interviews, with around 400 in each of four regions and in each of four departments, were conducted during July and August 2024. Business leaders were interviewed from organizations with revenue of $500m+ across a range of sectors.

This report uses data from the 411 respondents that selected “IT / digital” in response to the question, “Which of the following best describes your department in your organization?”

The sample used in this report is made up as follows:



Level of seniority

Board / C-level	**7%**
VP level	**12%**
Head of Department / Director	**37%**
Senior manager	**44%**

Organization revenue

$500m - $2bn	**21%**
$2bn - $10bn	**73%**
More than $10bn	**6%**

Industry sector

Life sciences	**4%**
Pharma	**2%**
Oil & gas	**9%**
Retail	**12%**
CPG / FMCG	**4%**
Manufacturing	**12%**
IT / technology	**22%**
Automotive	**5%**
Chemicals	**5%**
Banking	**9%**
Insurance	**6%**
Logistics	**5%**
Public sector	**3%**
Utilities	**2%**

Region

US	**25%**
Europe (France, Spain, UK)	**25%**
DACH (Austria, Germany, Switzerland)	**25%**
APAC (Australia, Japan, South Korea)	**25%**

Country

Australia	**11%**
Austria	**4%**
France	**7%**
Germany	**15%**
Japan	**7%**
South Korea	**7%**
Spain	**6%**
Switzerland	**6%**
UK	**12%**
US	**25%**

About Celonis

Celonis makes processes work for people, companies, and the planet. The Celonis Process Intelligence Platform uses industry-leading process mining and AI, and augments it with business context to give customers a living digital twin of their business operation. It's system-agnostic, without bias, and provides everyone with a common language for understanding and improving businesses, and enabling AI to be effective and relevant for the enterprise. Celonis empowers its customers to continuously realize significant value across the top, bottom, and green line.

Celonis is headquartered in Munich, Germany, and New York City, USA, with more than 20 offices worldwide.

Find out more at **celonis.com**

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